



## INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification <sup>7</sup> : <b>C07K 14/705, A61K 38/17, A61P 37/02, G01N 33/569, 33/68</b>		A3	(11) International Publication Number: <b>WO 00/32632</b> (43) International Publication Date: <b>8 June 2000 (08.06.00)</b>
<p>(21) International Application Number: <b>PCT/GB99/04027</b></p> <p>(22) International Filing Date: <b>1 December 1999 (01.12.99)</b></p> <p>(30) Priority Data: <b>9826378.3 1 December 1998 (01.12.98) GB</b></p> <p>(71) Applicants (for all designated States except US): ABERDEEN UNIVERSITY [GB/GB]; Auris University Centre, 23 St. Machar Drive, Aberdeen AB2 1RY (GB). THE COMMON SERVICES AGENCY FOR THE SCOTTISH HEALTH SERVICE [GB/GB]; Trinity Party House, South Trinity Road, Edinburgh EH5 3SE (GB).</p> <p>(72) Inventors; and</p> <p>(75) Inventors/Applicants (for US only): URBANIAK, Stanislaw, Joseph [GB/GB]; 14 Earlspark Crescent, Bieldside, Aberdeen AB15 9AY (GB). BARKER, Robert, Norman [GB/GB]; Courtin, Barthol Chapel, Inverurie AB51 8TD (GB).</p> <p>(74) Agents: ABLETT, Graham, Keith et al.; Ablett &amp; Stebbing, Caparo House, 101-103 Baker Street, London W1M 1FD (GB).</p>		<p>(81) Designated States: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).</p> <p><b>Published</b> <i>With international search report.</i></p> <p>(88) Date of publication of the international search report: <b>31 August 2000 (31.08.00)</b></p>	
<p><b>(54) Title:</b> ALLO- AND AUTO-REACTIVE T-CELL EPITOPIES FROM RHESUS PROTEIN AND THEIR USE</p> <p><b>(57) Abstract</b></p> <p>The present invention relates to a pharmaceutical composition for the prevention of alloimmunisation of a subject or the immunosuppression of a response elicited by alloimmunisation of a subject or an autoimmune haemolytic disease for said composition comprising an immunologically effective epitope of a rhesus protein or an immunologically active analogue or derivative thereof.</p>			

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## INTERNATIONAL SEARCH REPORT

Int. Application No  
PCT/GB 99/04027

A. CLASSIFICATION OF SUBJECT MATTER  
IPC 7 C07K14/705 A61K38/17 A61P37/02 G01N33/569 G01N33/68

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)  
IPC 7 C07K A61K G01N

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X, Y	<p>STOTT L M (REPRINT) ET AL: "Mapping alloreactive T cell epitopes on the Rhesus D protein." BLOOD, (15 NOV 1998) VOL. 92, NO. 10, PART 1, SUPP. '1!, PP. 25A. PUBLISHER: W B SAUNDERS CO, INDEPENDENCE SQUARE WEST CURTIS CENTER, STE 300, PHILADELPHIA, PA 19106-3399. ISSN: 0006-4971., XP000907115 UNIV ABERDEEN, DEPT MED &amp; THERAPEUT, ABERDEEN, SCOTLAND the whole document</p> <p>-----</p> <p>-/-</p>	1-23

Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

## \* Special categories of cited documents :

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- "E" earlier document but published on or after the international filing date
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- "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
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Date of the actual completion of the international search  12 May 2000	Date of mailing of the international search report  26/05/2000
Name and mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Authorized officer  Groenendijk, M

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## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X, Y	<p>BARKER E.A.: "Identification of T-cell epitopes on the rhesus polypeptides in autoimmune hemolytic anemia"            BLOOD,            vol. 90, no. 7,            1 October 1997 (1997-10-01), pages            2701-2715, XP002137569            cited in the application            the whole document</p> <p>-----</p>	1-23
Y	<p>BARKER E.A.: "Multiple self epitopes on the rhesus polypeptides stimulate immunologically ignorant human T cells in vitro"            EUR.J. IMMUNOL.,            vol. 24, 1994, pages 1578-1582,            XP000907120            the whole document</p> <p>-----</p>	1-23

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/GB 99/04027

### Box I Observations where certain claims were found unsearchable (Continuation of Item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1.  Claims Nos.:

because they relate to subject matter not required to be searched by this Authority, namely:

**Remark:** Although claim 17 is directed to a method of treatment of the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition.

2.  Claims Nos.:

because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:

3.  Claims Nos.:

because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

### Box II Observations where unity of Invention is lacking (Continuation of Item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1.  As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.

2.  As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.

3.  As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:

4.  No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

#### Remark on Protest

The additional search fees were accompanied by the applicant's protest.

No protest accompanied the payment of additional search fees.